



# **Beyond Waste Issue Paper**

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## **Data Trends and Collection**

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## Data Trends and Collection

### Getting “Beyond Waste”

The Washington State Department of Ecology (Ecology) has embarked on a project to update the statewide solid and hazardous waste management plans. The aim of the Beyond Waste Project is to guide Washington in a new direction away from simply managing wastes and toward preventing wastes from being generated in the first place. The vision statement for Ecology’s Beyond Waste Project is, *“We can transition to a society that views waste as an inefficient use of resources and believes that many wastes can be eliminated. Eliminating wastes will contribute to social, economic, and environmental vitality.”*

This is one of eight issue papers prepared by Ecology staff to help in the development of strategic plans to move Washington in a new direction, a direction that will take us beyond waste.

### Scope of Work

The Data Trends and Collection work group, formed by joining the Data Collection and Data Trends work groups, was tasked with answering the following questions:

- What are the current and projected future hazardous substance use and hazardous waste generation rates and trends?
- How has listing of wastes and regulatory changes impacted those trends?
- What are the trends for exports and imports of hazardous substances and hazardous waste?
- How are facilities managing wastes on-site?
- What’s working with our data collection efforts?
- What can we do better?
- How can we get there?
- What changes do we need to make in this area to move toward the Beyond Waste vision?
- Are we gathering the right information about toxics and public health threats in order to ensure that our priorities are set appropriately, according to degree of risk?
- How can we use the information we have gathered to inform others about public health, environmental problems, and progress, or lack thereof, toward sustainability?

The primary assignment was to examine current and past methods of hazardous waste and hazardous substance data collection, to identify the strengths and weaknesses of the data systems and to determine how useful these systems are in trend analysis. Data limitations and inconsistent data collection over time hamper the identification of trends etc., in hazardous waste generation. Two assumptions were made: 1) performance measures will

be needed to measure movement toward the goal of zero waste, and 2) the current methods of trend analysis will remain the primary sources of data.

The primary information sources examined for this task were the Hazardous Waste and Toxics Reduction (HWTR) Program data systems based on the following reports: Annual Dangerous Waste, Toxics Release Inventory, TIER Two Hazardous Chemical Inventory, and Pollution Prevention Planning. Other program and agency data systems were also studied. Additionally, the work group used information on environmental indicators, business growth indicators and census data to identify ways to apply forecasting tools to hazardous waste generation.

## **Visions, Goals and Objectives**

The vision shared by both the Solid and Hazardous Waste Programs is to “transition to a society that views wastes as inefficient uses of resources and believes that most wastes can be eliminated. Eliminating wastes will contribute to environmental, economic and social vitality.” Data collection and trend analysis are the tools that will be used to measure progress along the way and to determine if the process is working. The vision for the future of data collection and trends is:

1. *Better methods of measuring hazardous waste generation and hazardous substance use* – It is a goal is that this work group’s efforts, combined with the work of the consultant, will lead to improved methods of measuring hazardous waste generation and hazardous substance use. This could be via either a new tracking system or by improvements to existing tracking systems.
2. *Better application of data* – The improved methods of measuring would result in the ability to combine HWTR Program data with data from other sources to get a more complete view of the big picture.
3. *To help staff do a better job* – HWTR Program data would be used to more effectively help staff do their jobs, given limited resources.

## **Current Data Collection Efforts and Trends**

Research was conducted to determine what data is currently collected to answer questions like who reports, what is reported, what is not reported, etc. This information is summarized into a reporting system chart (Attachment 1) that identifies the strengths and weaknesses of each of the following data collection systems:

- Hazardous waste generation and management
- Biosolids produced, used, disposed of and treated
- Litter and illegally dumped solid waste
- Waste that can be composted
- Moderate risk waste and household hazardous waste collection and disposal
- Chemicals released into the environment

- Presence of hazardous substance and extremely hazardous substance chemicals
- Residential and commercial solid wastes recycled
- Solid waste disposed at permitted facilities

Most reporting systems were designed to address a specific environmental issue and many have limitations as possible performance measures. A number of common problems found in many of the various reporting systems have been identified.

Year to year comparisons are difficult for a variety of reasons including: not every facility reports, lack of enforcement options for those who fail to report, specific waste or chemical amounts are not always reported, inconsistent or incomplete data collection, and changes in reporting requirements. An example of changes in reporting requirements is the list of reportable chemicals under the Toxics Release Inventory which has grown from about 300 chemicals and chemical categories to over 600 chemicals and chemical categories. Any trend analysis of Toxics Release Inventory data must account for this (and other) reporting changes.

In spite of these limitations, the existing data systems provide significant amounts of information about hazardous waste and hazardous substances. The program is making important improvements in the quality of data collection and the trend analysis process. The results of these improvements include:

- *Data quality has improved* – The Data Needs Analysis done in 1995 simplified the dangerous waste reporting system. Forms and instructions were changed along with the format of data that is collected. These changes resulted in the submission of cleaner data with reduced reporting errors.
- *Data is more readily available* – Data is available faster and easier. Annual Dangerous Waste Reports are reviewed and data entered soon after being received, unlike in the late 80's and early 90's when the Information Unit was dealing with three years of data at a time, e.g., cleaning up 1989 report data, reviewing 1990 reports and receiving 1991 reports. Like the Dangerous Waste Report data, the improved data systems and electronic reporting for Tier Two Hazardous Chemical Inventory data and Toxics Release Inventory data have resulted in data being more readily available.
- *Data is easier to use* – The Hazardous Waste Information Management System came onboard in 1996. This gave staff in regional offices quick and easy access to the data. Now, with the revised data system (HWTRInfo), regional staff can do their own data analysis from their desktop computers. Tier Two Hazardous Chemical Inventory data and Toxics Release Inventory data are also available on HWTRInfo.
- *Data can be used to make projections* – The HWTR Program data can be used to make projections about the bigger universe of hazardous waste generation. Although only limited data is collected, what is collected is of good quality and it continues to

improve. Both Dangerous Waste data and Toxics Release Inventory data are used for projections. While new performance measures may be needed, the existing Dangerous Waste and Toxics Release Inventory systems can be used for trend analysis.

- *Changes in reporting requirements* – The *Dangerous Waste Regulations* and reporting requirements have changed over time. When reviewing data on hazardous waste generation, it's difficult to get a clear picture on the true volume of hazardous waste being generated. Past changes that affect the types and quantities of hazardous waste reported have hampered abilities to truly measure waste volumes. Please see Attachment 2, the "Reporting Changes" Chart, for a listing of regulatory and reporting changes since 1995. Similarly, the Toxics Release Inventory reporting requirements have changed since the federal law was passed in 1986. Attachment 3, the "TRI Reporting Changes" summarizes those changes.

## How Do We Measure Trends?

The current methods of projection or prediction of trends depend on the use of data from Dangerous Waste Annual Reports and the Toxics Release Inventory.

1. The Toxics Release Inventory data provides data on pounds of toxic chemicals released into various media and pounds of waste transferred off-site and to wastewater treatment plants. This data can be used to calculate generation rates prorated for pounds per person or pounds per area. Transfer data can include waste transferred into the state as well as waste transferred out of the state. Year to year comparisons need to be normalized for changes in reporting requirements. Additionally, Toxics Release Inventory data can provide trends in waste generation including waste treatment, recycling and energy recovery.
2. Dangerous Waste Reports provide data on the amount of dangerous waste generated in the state. Data can be analyzed by waste that is generated on a one-time or non-recurrent basis and waste that is recurrent. A significant portion of the Dangerous Waste generators are reporting to Ecology under the Pollution Prevention Planning law. The Dangerous Waste data can be limited to those reporting facilities. Each of these groups can be used for trends analysis.

## How Do We Measure Success Now?

The HWTR Program measures success through the following performance measures:

- ❖ **Reducing the percentage of hazardous waste generated by regulated facilities.** Waste generation amounts are based on recurrent hazardous waste, corrected for economic conditions. The trend in hazardous waste generation is downward, reflecting the program's efforts in general and specifically Pollution Prevention Planning and technical assistance, as well as compliance and enforcement. The goal

is a 2% reduction annually as actually reported (or 7% when adjusted for economic conditions). The base used is 255 million pounds.

- ❖ **Reducing the pounds of hazardous waste generated per person per year.** This success measure is calculated based on annual hazardous generation amounts, divided by the population figure for each year as provided by the Office of Financial Management.
- ❖ **Reducing the total pounds of toxic substances released per year (as reported under the Toxics Release Inventory).** Toxic chemical releases are based on reports filed under federal law. Releases are reported in total pounds and have not been normalized for changes in reporting requirements. Information on the rate of releases or concentration of chemicals is not included.
- ❖ **Decreasing the number of environmental threats per inspection by increasing the focus on those facilities that are a higher risk for non-compliance.** The Fiscal Year 1995 baseline measure indicates a marked decrease in environmental threats over previous years. Staff recognized this trend and targeted other facilities of concern, resulting in a higher rate of threats discovered for all four quarters of Fiscal Year 2000. The goal is to continue targeting the highest risk sites for inspections and increasing the percentage of business with significant compliance issues that are remedied.
- ❖ **Increasing the number of facilities that drop below Pollution Prevention Planning thresholds as a result of technical assistance provided by HWTR Program staff.** Technical assistance from staff can assist businesses in reducing waste generation to the point where they are not required to develop Pollution Prevention Plans – a strong incentive.
- ❖ **Increasing the number of pollution prevention projects implemented at facilities.** Assistance from staff can help take voluntary pollution prevention projects identified in a facility's Pollution Prevention Plan and make them a reality. These projects often save companies resources, reduce waste and save money.
- ❖ **Assessing statewide trends in waste generation by business sectors.** Trend assessments give the HWTR Program a better understanding of which sectors are making progress and why, and they enable Ecology to target areas for further assistance.
- ❖ **Increasing the number of high priority corrective action sites moving out of the "Remedial Facility Assessment" (RFA) stage of cleanup.** It may take years to properly remediate or clean up a site. Progress is measured in phases, with most of the work involved in the RFA stage.

- ❖ There are also eight specific performance indicators in the HWTR Program's Performance Partnership Agreement with EPA (see pages 29 and 30 of that agreement).

## **Status Quo over Time**

Over next 25 years...

- Goods are expected to grow 10%
- Services are expected to grow 30%
- Population is expected to grow 26%

More people + more growth = more hazardous waste. Even though existing performance measures may now predict decreases in hazardous waste generation or toxic chemical releases over time, population growth will result in increases in other areas of hazardous waste generation which may not be taken into account.

Assuming that the current methods of data collection and data trend analysis are unchanged, the progress toward program goals will continue to be measured in the same ways they are now. The limitations of these data systems are summarized in Attachment 1. These limitations will continue to impact the data collection process. There will be a significant amount of data on the areas that are tracked by the Annual Dangerous Waste, Toxics Release Inventory and Pollution Prevention Planning reports. The progress of those segments of the hazardous waste universe will be well measured. The probability still exists that a significant part of hazardous waste generation or hazardous substance use will be missed or underreported. As an example, the Toxics Release Inventory only covers 14 percent of the known air toxics. Other segments such as pollution from non-regulated businesses or automobiles are not included. If the measure of releases of toxics was limited to the Toxics Release Inventory, the progress toward zero waste could be misrepresented.

## **Barriers and boundaries that inhibit progress toward the goal**

This section focuses only on data that is currently collected. The existing data systems represent the current knowledge base on hazardous waste generation and hazardous substance use. Using existing data systems, the following are barriers that limit the ability to measure progress toward the Beyond Waste goal:

- ❖ *Predicting Future Waste Streams.* There is a limited ability to predict future waste streams (such as today's problem with cathode ray tubes).
- ❖ *Adapting to Changes in Regulations.* Changing regulations and reporting requirements inhibit the ability to adequately track trends in hazardous waste generation and management.

- ❖ *Lack of Performance Measures.* Reliable and accurate performance measures are needed to determine if actions are making a difference. The performance measurements used now may not be accurate. One example of this is the pollution prevention measurement method for reaching the 50% hazardous waste reduction goal. The current measurement method indicates that hazardous waste generation is decreasing. However, it does not account for regulation changes that have reduced the types of waste that must be reported as hazardous waste (like antifreeze) or changes to the Small Quantity Generator accumulation limit.
- ❖ *Lack of Targeted Efforts.* Recognizing important trends early on will allow the HWTR Program to better target its resources. For example, where is the growth in hazardous waste generation likely to occur? Identifying indicators of economic activity related to hazardous waste generation and material use is one idea that might help predict program needs.
- ❖ *The Need to Count Hazardous Waste Differently.* Hazardous waste is counted but not connected to the big picture. There is a need to combine hazardous waste data with other information to get a complete picture. For example, in the year 2000, 159 auto dealers and repair shops submitted annual reports that indicated that they had generated over 1 million total pounds of hazardous wastes. This is over 6,000 pounds per establishment. Is this most of the waste from that sector? U.S. Economic Census data show that only 3.5% of the auto dealers and repair shops in this state submit annual reports. Such a small percentage raises a number of questions about what may be missing. One idea for filling this information gap is to determine how much hazardous waste is generally produced per employee in similar businesses, and then use economic census data on employment per establishment to estimate hazardous waste generation of the establishments that don't submit Annual Dangerous Waste reports.
- ❖ *Limited ability to track hazardous substance use.* Currently, the best available data sources on hazardous substance use are the Tier Two Hazardous Chemical Inventory and the Pollution Prevention Plans. However, this data is insufficient for trend analysis of hazardous substance use.

## **What Changes Are Needed to Move Toward the Vision?**

### **Short-term**

It is assumed that the hazardous substance and hazardous waste data currently collected and analyzed by the HWTR Program will continue to be the foundation of Ecology's data system. To meet the goals of the Beyond Waste Vision, two specific changes to this system may be needed in the short-term.

1. Adoption of a material flow framework so there is a more systematic approach to looking at the data already available. This will allow Ecology to identify potential

problem waste streams before they become problems identify data gaps, and strengthen the existing data system.

2. Ecology needs to identify and fill data gaps by:

- Tracking moderate risk waste which is generally not reported now. Moderate risk wastes are hazardous wastes generated by households and businesses that generate less than 220 pounds per month. To do this the HWTR Program will need to work with the Solid Waste and Financial Assistance Program with a commitment from local government.
- Adopting a more holistic approach to data collection and trends including use of economic and industry data. One possibility is to use field staff to collect more data such as the number of employees at each generator. Another possibility would be to look for commonalities in industrial processes to be able to apply methods across industries. In addition, process codes in reporting are generic. The adoption of the National American Industrial Classification System code system may provide data that gives Ecology more uniform processing codes across industries.
- Getting more information on the constituents of wastes. Ecology may want to adopt the use of Chemical Abstracts Service (CAS) numbers in waste tracking. This would involve a regulatory change. It would provide chemical-specific waste tracking. This would assist in making links between industries that use the same chemical, allowing a waste for one industry to become the raw materials for another. However, it may be difficult for the regulated industries to provide CAS numbers due to large numbers of available codes. One idea may be to provide CAS numbers just for persistent, bioaccumulative and toxic chemicals.
- Gathering data in a manner that will assist with the HWTR Program sector campaigns since that is the overall focus for moving Beyond Waste in the industrial sector.

### **Long-term**

Perhaps the most important data issue is to have reliable performance measures in place and to keep them in place long enough to be able to see the trends. Ecology has already discovered the problem of having performance measures that are not reliable. The Pollution Prevention Planning goal of reducing waste in Washington by 50 percent is an example. It can be said that the goal has been met, but only with major caveats attached because the definitions of waste have changed and there have been adjustments for economic conditions. It may be said that Washington has reduced hazardous waste generation by 50 percent when in fact the amount of waste may still be increasing.

The process of developing these long-term performance measures is critical. Ecology needs to continually evaluate its performance measures/indicators to make sure that the trend measurements are accurate and these measurements will track progress

toward our goal. One way to judge the quality of these measures is when outside parties like and use the data generated by Ecology.

### **How Can We Get There?**

- Formation of the Big Information Group data trends work group.
- Using the information provided by the consultants on the Beyond Waste Project.
- Getting a commitment from HWTR Program management to continue using the tracking system for at least 10 years.

### **How Would We Measure Success?**

Success is a data tracking system that accurately measures progress in reaching the Beyond Waste goal. It will be necessary to select new performance measures that are specific to the Beyond Waste initiatives. They will be composed of data elements that Ecology thinks are a close reflection of reality. Ecology will need to continue to reevaluate its performance measures. The short-term goal is to know what changes will be made by the end of the biennium and have a plan in place for implementation.

### **What Changes Are Necessary?**

Specific recommendations:

1. Form Big Information Group data trends group to make more specific recommendations.
2. Explore the possibility of having field staff collect more data, for example record number of employees.
3. Establish more uniform codes for processes using National American Industry Classification System data.
4. Improve moderate risk waste tracking.
5. Complete baseline data by the end of the biennium.
6. Improve consistency and accuracy in data tracking. Data needs to reflect reality and be useful to others.
7. Sell the concept of Beyond Waste to the public and gain support for changes needed to achieve the vision.

## Attachment 1

### Outline of Current HWTR Reporting Systems

Reporting System	Who Reports	Reporting Threshold	Frequency of Reports	What is Reported	Most Recent Summarized Data Report
Annual DW Report	<p>All companies with an Active RCRA Site ID#</p> <p><u>Includes:</u></p> <ul style="list-style-type: none"> <li>Regulated generators</li> <li>Protective filers</li> <li>TSDR's</li> <li>Transporters</li> <li>Transfer Facilities</li> <li>Used oil processors</li> <li>Used oil re-refiners</li> </ul>	<p>Anyone with an Active ID#</p> <p>Waste generation rate &gt;220 lbs/month</p> <p>Anyone who received waste from another site</p>	<p>Annual</p> <p>Approx. 7,000 reports received each year</p>	<ul style="list-style-type: none"> <li>General information, including name, location, etc.</li> <li>Generator status &amp; Transporter activities</li> <li>Used Oil activities &amp; Permitted TSDR activities</li> <li>HW Generation</li> <li>Types and amounts of waste generated</li> <li>What they did with it &amp; Where they sent it</li> <li>Receipt &amp; Mgmt of HW</li> <li>Types and amounts of waste they received</li> <li>Who they received it from &amp; how they managed it</li> </ul>	2000 Annual DW Report Summary
EPCRA SARA Title III Sect. 302	Businesses that have extremely hazardous substances on site at any one time	Amount greater than or equal to threshold planning quantity (TPB) or 500 lbs., whichever is less	One-time notifying letter	Chemical/substance/product above a certain quantity level.	
EPCRA SARA Title III Sect. 304	Businesses that release an EHS or CERCLA chemical in a quantity equal to or greater than reportable quantity	Depends on chemical	Immediate phone with written follow-up	Chemical releases above a certain quantity level. Includes :Time, location, chemical, CAS#, quantity, duration	Releases above a threshold
EPCRA SARA Title III Sect. 311 & 312	All businesses subject to OSHA Hazard Communication Standards with chemicals present in excess of threshold levels.	<p>Hazardous substances = 10,000 lbs. EHS = 500 lbs. or less, depending on the TPQ, whichever is less.</p> <p>Law allows specific exemptions.</p>	<p>Sect. 311: One time submittal of forms or copies of MSDS, with revision, if necessary</p> <p>Sect. 312 Tier Two Hazardous Chemical Inventory Report</p> <p>Annually, 4,000 reports received each year</p>	<ul style="list-style-type: none"> <li>General information including name, location, etc.</li> <li>Chemical Description &amp; Physical/Health Hazards</li> <li>Inventory (by range code),</li> <li>Storage Codes &amp; Storage Locations on-site</li> </ul>	Chemicals in Washington State Summary Report: 2000

EPCRA SARA Title III Sect. 313	Businesses in Manufacturing SIC/NAICS code groups (20-39) and Certain metal mining and utilities, federal facilities, bulk chemical and petroleum storage, commercial TSDs, and solvent recyclers	<p>Manufacture, process, or <u>use</u> any listed chemical in excess of its threshold amount during the calendar year.</p> <p>Thresholds:</p> <ol style="list-style-type: none"> <li>1. &gt; 10</li> <li>2. Toxic chemical Mfg or processes 25,000 lbs.</li> <li>3. Listed toxic chemical uses 10,000 lbs.</li> <li>4. PBTs - 10 or 100 lbs. use (mercury 10 lbs.)</li> <li>5. Dioxin 0.1 grams use</li> </ol>	<p>Annually to both Ecology and EPA by July 1<sup>st</sup> for previous calendar year</p> <p>Approx. 1200 reports from 350 companies received each year</p>	<ul style="list-style-type: none"> <li>• General information including name, location, etc.</li> <li>• Dioxin Category</li> <li>• Mixture Component Identity</li> <li>• Activities &amp; uses of chemical at facility</li> <li>• Maximum code for chemical on-site</li> <li>• Quantity of chemical released &amp; type of release</li> <li>• Transfer chemical off-site</li> <li>• On-site waste treatment methods, On-site energy recovery processes, On-site recycling processes</li> <li>• Source reduction &amp; recycling activities</li> </ul>	Chemicals in Washington State Summary Report: 2000
Pollution Prevention Planning	<p>Facilities who generate &gt;2,640 lbs/year of recurrent waste and/or are TRI reporters</p> <p>Recycling credits factor in</p> <p>TRI is limited to certain SIC. If less than certain # of employees, doesn't have to report.</p>	TRI thresholds 10,000 lbs. & 25,000 lbs., only certain SIC codes and > 10 employees	<p>Plans are submitted once followed by 5 year plan updates</p> <p>APR's, and EMS are submitted annually</p> <p>EMS is optional; it becomes a substitute, but still has an annual update.</p>	<ul style="list-style-type: none"> <li>• APR's include the following: Implemented opportunities, Info on new or amended perf. goals, Info on changes in production or service levels, Reasons for changes in HW gen. and HS use over time, Implement plan</li> <li>• P2 Plan worksheets including Facility Description</li> <li>• Identification of HS (95% of what they use), Identification of HW (95% of what they generate), Process Description, P2 Opportunities, Selected opportunities/ Implementation plan</li> </ul>	<p>1999 Reducing Toxics in Washington Report</p> <p>Bi-annual Program Report</p>

**Attachment 2**  
**Annual Dangerous Waste**  
**Reporting Changes**  
June 10, 2002

Yes = waste was reported

No = waste not reported

Reporting of:	'95	'96	'97	'98	'99	'00	Overall change in reported waste amounts	Comments
Copper bearing etchant becomes product not waste	Yes	No	No	No	No	No	Decrease	
Federal Battery Exemption (preempts Universal Waste Rule)	Yes	No	No	No	No	No	Decrease	
Immediately Recycled Waste (double counting)	Yes	Yes	Yes	No	No	No	Decrease	
K141, K145, K146, K147, K148	No	No	No	Yes	Yes	Yes	Increase	
K149, K150, K151	No	No	Yes	Yes	Yes	Yes	Increase	
K169, K170, K171, K172	No	No	No	No	No	Yes	Increase	
Military Munitions	No	No	No	No	No	Yes	None	No noticeable changes.
PBR Immediately Managed	Yes	Yes	Yes	No	No	No	Decrease	
Safety Kleen CUP Program	Yes	Yes	Yes	Yes	Yes	No	Decrease	
SQG Accumulation Limit in pounds	220	2,200	2,200	2,200	2,200	2,200	Decrease	
Universal Waste Lamps	Yes	Yes	Yes	Yes	Yes	No	Decrease	
Universal Waste Thermostats and Batteries	Yes	Yes	Yes	No	No	No	Decrease	
W002 Antifreeze	Yes	Yes	Yes	No	No	No	Decrease	

## Attachment 3

## Changes in Toxic Release Inventory Reporting 1987-2002

TOXIC RELEASE INVENTORY REPORTING REQUIREMENTS, 1987 - 2002				
YEAR	INDUSTRY CATEGORIES	REPORTABLE QUANTITIES	CHEMICALS	OTHER
1987-1990	Manufacturing	75,000 Manu.* 10,000 Use (1987) 75,000 Manu.* 10,000 Use (1988) 25,000 Manu.* 10,000 Use (1989)	List of 308 chemicals Deleted (1987-1989): Titanium oxide, C I acid blue #9, diammonium salt; CI acid blue #9, disodium salt; melamine crystal; sodium sulfate (solution Sodium hydroxide (solution) Modified: Aluminum oxide (only fibrous forms) Added (1990) : Allyl alcohol; creosote; 2,3-dichloropropene; dinitrobenzene; dinitrotoluene; isosafrole; toluene diisocyanate Deleted: Terephthalic acid ; C I pigment green 7; C I pigment blue 15; C I pigment green 36	
1991-1993	Manufacturing	25,000 Manu. 10,000 Use	Added (1991): 7 CFC's and halons , Deleted (1993): Barium sulfate from barium compounds, Di-N-octyl phthalate	Pollution Prevention data elements added (1991)
1994	Manufacturing Federal Facilities	25,000 Manu. 10,000 Use	Added: 11 HCFCs and 21 chemicals and 2 chemical categories that are RCRA hazardous wastes Administrative stay: Hydrogen sulfide, methyl mercaptan Deleted: Acetone, copper monochlorophthalocyanine pigment, butyl benzyl phthalate Modified: Ammonia, Sulfuric acid, glycol ethers	
1995	Manufacturing Federal Facilities	25,000 Manu. 10,000 Use	Added: 286 chemicals/chemical categories. Deferred addition: 41 chemicals Modified: sulfuric acid	Alternate threshold
1998	Expanded to include 7 new industry categories	25,000 Manu. 10,000 Use	List contains 579 individual chemicals and 28 chemical categories	
2000		New thresholds for PBTs 100 lbs or less		
2001		Lead/lead compounds 100 lbs.		